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Under the combined influence of the electric and magnetic fields the appearance of the p components is apparently unchanged. Beyond the dark space the p component, subjected to the magnetic field alone, remains single, while in this region two parallel n components appear—the regular Zeeman effect for the $H\beta$ line. Where they enter the dark space the two n components are weak and diffuse. From the present photographs it is impossible to say whether each of the n components is split into two parts by the electric field, but it is hoped that this may soon be settled with the aid of higher dispersion.

Some of the lines of the secondary hydrogen spectrum, when photographed in the electric field, disappear completely in the Crookes dark space, while others are but little reduced in intensity there. When photographed in the combined electric and magnetic fields, certain of the lines of the latter class seem to undergo a much greater reduction of intensity, tho the variations observed in different vacuum tubes are such as to require further confirmation of this result. As further investigations with higher dispersion are in progress, a detailed discussion of these changes will be postponed until better photographs become available.

Mr. Sinclair Smith, student assistant, has had an important part in this work, and deserves much credit for his preparation of the vacuum tubes and skillful manipulation. Dr. Anderson has given valuable advice on the design of the tubes and the arrangement of the apparatus.

George E. Hale.

Summary of Mount Wilson Magnetic Observations of Sun-Spots for January and February, 1921.

January and February showed no particular increase or decrease in spot activity. The average number of groups observed daily was 2.7 in January and 2.6 in February. Many of these groups were very small.

Records of activity in terrestrial magnetism on February 17th, 18th and 19th will be of special interest on account of the position and activity of No. 1811 on these dates.

MAGNETIC CLASSIFICATION OF SUN-SPOTS FOR JANUARY, 1921

No.	C. M. P.	Lat.	H	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1785	Dec. 26.1	+ 9	28	x														
1786	30.0	−12	26	βp	αp	x	x	x										
1787	30.8	+19	19	βf														
1790	Jan. 5.3	− 7	23	βp	βp	x	γ	βp	βp	βp	βp	β						
1791	14.5	− 9	28								x	β		β	β	β	βp	x
1792	9.4	−14	28											β	β	βp	βp	x
1793	13.5	+ 6	13												β	βp	βp	x
1794	17.3	+ 3	24												αp	αp	βp	x
				4	2	2	2	2	1	1	2	2	.....	2	4	4	4	4

No.	C. M. P.	Lat.	H	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1791	Jan. 14.5	− 9	28	βp					x										
1794	17.3	+ 3	24	x					αf										
1795	17.8	− 8	2	β					β										
1796	25.2	−10	16						αp			αp	αp						
1797	25.7	−12	17						βp			α	α	βp		βp	βp		x
1798	29.2	+13	8									α	αp	αp					
1799	Feb. 1.6	− 8	6													α	x		
1800	Jan. 29.3	+11	1																βf
1801	Feb. 4.9	−16	16																βp
1802	5.4	−15	27																α
				3	.....	.....	.....	.....	5	.....	.....	3	3	2	.....	2	2	.....	4

NOTES.

No. 1792	A large active group which developed rapidly.
No. 1794	The preceding spots disappeared leaving a single spot, in the northern hemisphere, of field-strength 240 usses and negative polarity.
No. 1797	This group closely followed No. 1796 so that on some days the two appeared as a long stream. On January 24th and 25th No. 1797 consisted of two small negative spots about 6 degrees apart in longitude. It had the appearance of a bipolar group, but both spots were of the same polarity. On those days it might have been classified as two groups.

MAGNETIC CLASSIFICATION OF SUN-SPOTS FOR FEBRUARY, 1921

No.	C. M. P.	Lat.	H	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
1801	Feb. 4.9	−16	16	βp	βp	βp	βp	βp	β										
1802	5.4	−15	27	α	α	α	α	α	α	α	α	α	α	α					
1803	6.0	+ 7	5		αp	αp	α												
1804	10.5	− 9	24					x	x	x	βp	αp	αp	βp	αp	βp		x	
1805	10.9	−16	13							x	α	α	x						
1806	16.7	−10	14											x	αp	βp		αp	
1807	5.	+13	x											x					
1808	11.7	−13	x												β				
1809	17.9	− 8	4												x	α		αp	
				2	3	3	3	3	3	3	3	3	3	4	4	3	.....	3	

No.	C. M. P.	Lat.	H	16	17	18	19	20	21	22	23	24	25	26	27	28			
1804	Feb. 10.5	− 9	24	x															
1806	16.7	−10	14	βp		αp													
1809	17.9	− 8	4	αp															
1810	21.0	−14	x	x															
1811	18.0	− 7	24			βp	β	β		β	β	x							
1812	20.6	−10	21							βp	βp	βp	βp	x					
1813	Mar. 4.4	+14	18											x	αp	αp			
1814	4.7	−14	4												αp	αp			
				4	.....	2	1	1	.....	2	2	2	1	2	2	2			

NOTES.

No. 1802 A return of No. 1792.

No. 1804 A return of No. 1791.

No. 1805 A cluster of *positive* spots in the southern hemisphere.

No. 1811 This was a very active group. It developed rapidly between February 16th and 18th. No observations were made on February 17th. The group was the result of renewed activity in the region of No. 1809. On February 18th the group was directly in the center of the disk. This should have been a very favorable condition for magnetic disturbances on the Earth.

No. 1814 A return of No. 1802.

THE LICK OBSERVATORY JOURNAL CLUB

The Journal Club of the Lick Observatory has held meetings, usually on alternate Wednesdays, thruout the winter. Members of the regular staff have been the speakers at nearly all of the meetings, but on March 4th, Dr. H. F. Blichfeldt, professor of mathematics in Stanford University was present, by invitation, and gave a concise and logical presentation of Einstein's theory of generalized relativity from the viewpoint of the mathematician. On March 16th, Dr. Bertil Lindblad, of the University of Upsala, Sweden, at present a volunteer assistant in the Mount Wilson Observatory, gave an account of his researches on the distribution of intensity in the continuous spectra of the Sun and the fixed stars, and its relation to spectral type and luminosity.